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EXAMINER

TSOY, ELENA

ART UNIT

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14

Please find below and/or attached an Office communication concerning this application or proceeding.

A 8-13

Office Action Summary	Application No.	Applicant(s)	
	09/332,273	MIENTUS ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-37 and 42-77 is/are pending in the application.
- 4a) Of the above claim(s) 66-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-65 and 74-77 is/are rejected.
- 7) ☒ Claim(s) 29-37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

Continued Prosecution Application

1. The request filed on June 13, 2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/332273 is acceptable and a CPA has been established. An action on the CPA follows.

Response to Amendment

2. Amendment filed on June 13, 2002 has been entered. New claims 42-77 have been added. Although Applicants stated that claims 1, 3-21, 23-28, and 40-41 have been cancelled, the Examiner assumed that claims 29-37 have also been cancelled as well as claims 1, 3-21, 23-28, and 40-41, since claims 29-37 are dependent claims of cancelled claims 21, 24, 25; and Applicants stated in Remarks that only claims 42-77 are pending in the application.

Election/Restrictions

3. Newly submitted claims 66-73 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The newly submitted claims 66-73 are directed to an invention that was claimed by originally presented non-elected claims 39, 40.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 66-73 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

4. Claims 29-37 are objected to because of the following informalities: claims 29-37 are dependent on cancelled claims 21, 24, 25. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 49, 52 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 49, lines 2-3, 4-5; Claim 52, lines 2-3, "ethylene-unsaturated carboxylicacrylic acid copolymers" and "ethylene-unsaturated carboxylicmethacrylic acid copolymers" render the claim indefinite since it is not clear whether "ethylene-unsaturated carboxylicacrylic acid copolymers" and "ethylene-unsaturated carboxylicmethacrylic acid copolymers" are "ethylene-(meth)acrylic acid copolymers" since (meth)acrylic acid is in fact unsaturated carboxylic acid or "ethylene-unsaturated carboxylic acid-acrylic acid copolymers". For examining purposes the phrases were interpreted as -- ethylene-(meth)acrylic acid copolymers --.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 42-46, 52, 74, 75** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,946,532).

As to claim 42, Freeman discloses a multilayer thermoplastic signage film (See column 7, line 41; column 11, lines 5, 56-58) comprising:

a polyolefin core layer having a density in the range of about 0.915-0.965 (See column 9, lines 65-68), having a first side and a second side (See column 9, lines 65-66),

an abrasion resistant (See column 9, lines 52-53) first thermoplastic (See column 2, lines 59, 68) skin layer overlying the first side of the core layer (See Fig. 5; column 9, lines 9-14), and

a clear second thermoplastic (See column 2, lines 59, 68) skin layer overlying the second side of the core layer (See Fig. 5; column 9, lines 9-14),

a composition of the core layer being different than a composition of the skin layers, and the core layer and the skin layers being characterized by the absence of PVC (See column 10, lines 9, 33-44). **As to claim 74**, a multilayer thermoplastic film combined with a pressure-sensitive adhesive and a liner is die cut and decorated for use as thermal die-cut signs (See column 7, lines 39- 41; column 11, lines 5, 56-58; column 12, lines 1-11). Although Freeman does not expressly show that the film is die cut electronically, it is obvious that the film is cut using a computer.

Freeman further teaches that the first skin layer may have controlled surface texture, whether gloss or matte (See column 9, lines 52-55). However, Freeman fails to teach that the initial 60° gloss is about 80 or more (Claims 42, 74).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a first skin layer in a multilayer thermoplastic film of Freeman with any degree of gloss including claimed 60⁰ gloss is about 80 or more depending on the intended use of the film since Freeman teaches that the first skin layer may have any controlled surface texture, and the first skin layer is made of the same claimed material.

As to claims 43, 75, since the first skin layer is made of the same claimed material (See column 10, lines 33-50; specification, page 11, lines 14-34), it would have the same 60⁰ gloss reduction of 20 points after five cycles of rotation.

As to claim 44, Freeman further teaches that an intermediate tie layer 53 may be positioned between the core layer and first or second skin layer (See Fig. 6; column 9, lines 30-33; column 11, lines 45-47). In this case the first skin layer becomes a clear top layer over "skin" layer 53.

As to claim 45, Freeman further teaches that a pressure sensitive adhesive overlies the second thermoplastic skin layer. See Figs. 5, 6; column 6, lines 12-20.

As to claim 46, Freeman further teaches that a release liner of polymeric film (See column 2, lines 12-14) overlies the layer of pressure sensitive adhesive. See Figs. 5, 6; column 6, lines 12-20.

As to claim 52, Freeman further teaches that the first skin layer is comprised of ionomer derived from ssodium, or zinc salts of ethylene methacrylic acid copolymer (See column 10, lines 33, 41-44).

9. Claims 49, 50, 53, 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,946,532) in view of McHenry et al (US 4,525,134).

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Freeman, as applied above, further teaches that tie layers 53 such as "CXA" "Plexar" (ethylene-unsaturated acid copolymer) or other specific (adhesion promoting) materials (See column 10, lines 16-21) may be inserted between the core layer and the skin layers in order to enhance adhesion between the layers (See Fig. 6; column 9, lines 30-33; column 11, lines 45-47). However, Freeman fails to teach that the adhesion promoting materials can be added to the core layer instead of using as intermediate layer in order to enhance the adhesion between the core layer and the skin layers.

McHenry et al teach that the adhesion between the core layer and the skin layers can be enhanced either by inserting a tie layer of an adhesion promoting material between the layers or adding the adhesion promoting material to the core layer and/or the skin layers (See column 7, lines 4-14). In other words, adding the adhesion promoting material to the core layer is functionally equivalent to inserting a tie layer of adhesion promoting material between the layers.

As to claims 49, 53, 54, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added an adhesion promoting material to the core layer of Freeman instead of inserting the tie layer between the core layer and the skin layers, since McHenry et al teach that both steps are functionally equivalent. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added "CXA" "Plexar" (ethylene-unsaturated acid copolymer) or ethylene-unsaturated acid copolymers or a material of the skin layers such as polyethylene (meth)acrylic acid copolymers, ionomers, as an adhesion promoting material to the core layer since it is well known in the art that that similar materials adhere well to each other. Thus, an amount of an adhesion promoting material is result-effective variable in a laminating process.

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As to **claim 50**, it is held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined optimum amount of an adhesion promoting material in a core layer of Freeman depending on the material of the core and skin layers.

10. **Claim 51** is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,946,532) in view of Fukushima et al (US 4,542,061).

Freeman, as applied above, further teaches that the core layer comprises small amounts of various additives such as antioxidant, etc. (See column 4, lines 40-43). However, Freeman fails to teach that a light stabilizer is added to the core layer in a multilayer thermoplastic signage film at a concentration of 1000-10,000 ppm based on the weight of the core layer.

Fukushima et al teach that a light stabilizer added to a polyolefin core layer in a multilayer thermoplastic film at a concentration of 500-20,000 ppm based on the weight of the core layer protects the film when used outdoors (See column 8, lines 3, 9, 28-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a light stabilizer to a polyolefin core layer in a multilayer thermoplastic film of Freeman at a concentration of 500-20,000 ppm based on the weight of the core layer with the expectation of providing the desired protection of the film when used outdoors, as taught by Fukushima et al.

11. **Claims 55-63** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,946,532) in view of McHenry et al (US 4,525,134), as applied above, and further in view of Fukushima et al (US 4,542,061).

Combination of Freeman and McHenry et al, as applied above, fails to teach that a light stabilizer is added to the core layer in a multilayer thermoplastic signage film at a concentration of 1000-10,000 ppm based on the weight of the core layer.

Fukushima et al teach that a light stabilizer added to a polyolefin core layer and/or skin layers in a multilayer thermoplastic film at a concentration of 500-20,000 ppm based on the weight of the core layer protects the film when used outdoors (See column 8, lines 3, 9, 28-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a light stabilizer to a polyolefin core layer and/or skin layers in a multilayer thermoplastic film of combination of Freeman and McHenry et al at a concentration of 500-20,000 ppm based on the weight of the core layer and/or skin layers with the expectation of providing the desired protection of the film when used outdoors, as taught by Fukushima et al.

As to claim 56, since the first skin layer of combination of Freeman and McHenry et al is made of the same claimed material (See column 10, lines 33-50; specification, page 11, lines 14-34), it would have the same 60⁰ gloss reduction of 20 points after five cycles of rotation.

As to claim 57, Freeman further teaches that an intermediate tie layer 53 may be positioned between the core layer and first or second skin layer (See Fig. 6; column 9, lines 30-33; column 11, lines 45-47). In this case the first skin layer of combination of Freeman and McHenry et al becomes a clear top layer over “skin” layer 53.

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As to claim 58, Freeman further teaches that a pressure sensitive adhesive overlies the second thermoplastic skin layer. See Figs. 5, 6; column 6, lines 12-20.

As to claim 59, Freeman further teaches that a release liner of polymeric film (See column 2, lines 12-14) overlies the layer of pressure sensitive adhesive. See Figs. 5, 6; column 6, lines 12-20.

As to claim 60, Freeman further teaches that the core layer and the skin layers comprise coextrudate. See column 9, lines 11-14.

As to claim 61, Freeman further teaches that the first skin layer is comprised of ionomer derived from sodium, or zinc salts of ethylene methacrylic acid copolymer (See column 10, lines 33, 41-44).

As to claims 62, 63, the core layer of the film of combination of Freeman and McHenry et al further comprises an adhesive material for the reasons applied above to claims 49, 53, 54.

12. **Claims 47, 48, 76, 77** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,946,532) in view of Bingham (US 3,758,192).

Freeman, as applied above, further teaches that a core layer may have whitening or coloring agent (See column 4, lines 40-44).

Freeman fails to teach that a multilayer thermoplastic signage film comprises an opacifying layer comprising the white pigment, a black pigment or a mixture thereof between the core layer and the second skin layer (Claims 47, 48); comprises an opacifying layer comprising the white pigment, a black pigment or a mixture thereof between the core layer and the adhesive priming layer (Claims 76, 77).

Bingham teaches that an adhesive layer 18 behind a binder layer 17 in a multilayer signage film (See column 1, lines 7-8) may be pigmented in order to reinforce or complement the color of the binder layer 17 (See Figs. 3, 5; column 4, lines 16-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have pigmented an adhesive layer 53 in a multilayer thermoplastic signage film of Freeman with the expectation of reinforcing or complementing the colored or whitened core layer, as taught by Bingham.

13. **Claims 64, 65** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,946,532) in view of McHenry et al (US 4,525,134), further in view of Fukushima et al (US 4,542,061), as applied above, and further in view of Bingham (US 3,758,192).

Freeman, as applied above, further teaches that a core layer may have whitening or coloring agent (See column 4, lines 40-44). Combination of Freeman, McHenry et al and Fukushima et al, as applied above, fails to teach that a multilayer thermoplastic signage film comprises an opacifying layer comprising the white pigment, a black pigment or a mixture thereof between the core layer and the second skin layer.

Bingham teaches that an adhesive layer 18 behind a binder layer 17 in a multilayer signage film (See column 1, lines 7-8) may be pigmented in order to reinforce or complement the color of the binder layer 17 (See Figs. 3, 5; column 4, lines 16-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have pigmented an adhesive layer 53 in a multilayer thermoplastic signage film of combination of Freeman, McHenry et al and Fukushima et al with the expectation of reinforcing or complementing the colored or whitened core layer, as taught by Bingham.

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Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on 9:00-5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Elena Tsoy
Examiner
Art Unit 1762

July 30, 2002


MICHAEL BARR
PRIMARY EXAMINER